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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,757	11/12/2003	Stephen Y. Chou	PRUN-100US	7832

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EXAMINER	
TRAN, BINH X	
ART UNIT	**PAPER NUMBER**
1792	
MAIL DATE	**DELIVERY MODE**
10/31/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/706,757	CHOU ET AL.	
	Examiner	Art Unit	
	Binh X. Tran	1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 June 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6,8,10-17,19,30,35-47 and 49-55* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6, 8, 10-17, 19, 30, 35-47, 49-55* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-6, 8, 10-17, 19, 30, 35-47, 49-55 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1 lines 4-5, the applicants recite "a polymeric composition including an internal mold release agent" (i.e. internal mold release agent is a required ingredient/compound). However, in the dependent claim 17, the applicants recite the film comprises "from about 20 weight percent to 100 weight percent of said polymeric composition, up to about 80 weight percent of a plasticizer, and up to about 30 weight percent of a mold release agent" (emphasis added). When the film comprises 100 weight percent of the polymeric composition, the mold release agent must comprise zero weight percent. Further, the examiner interprets the phrase "up to about 30 weight percent of a mold release agent" means zero to 30 weight percent of the mold release agent. The examiner also interprets up to about 80 wt% of plasticizer means zero to 80 wt% of plasticizer. Therefore, it is unclear from the independent claim 1 that whether the mold release agent is a required ingredient/compound or an optional ingredient/compound. For the purpose of examination, the examiner will reserve the right to interprets 0% weight percent of mold release agent in the prior art read on

applicant's claimed invention. The examiner also reserve the right to interprets 0% weight percent of plasticizer in the prior art read on applicant's claimed invention.

In claim 15, the examiner reserves the right to interprets “up to about 90 weight percent monomer” means 0-90 wt% of monomer.

Claims 16-17 recites the limitation "said nanoimprint resist" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

Claims 2-6, 8, 10-17, 19 are indefinite because they directly or indirectly depend on claim 1.

In claims 30 and 38, the applicants recite “comprising a polymeric composition including an internal mold release agent". As discussed above, it is unclear from the claim that whether the mold release agent is a required ingredient/compound or an optional ingredient/compound. For the purpose of examination, the examiner will reserve the right to interprets 0% weight percent of mold release agent in the prior art read on applicant's claimed invention.

Claims 35-37, 39-47 are indefinite because they directly or indirectly depend on claim 30 or 38.

In claim 49, the applicants recite "the film comprising from about 20 to 100 wt% of a thermoplastic polymer and an internal mold release agent” (emphasis added). When the film comprises 100 weight percent of the thermoplastic polymer, the mold release agent must comprise zero weight percent. Therefore, it is unclear from the independent claim 49 that whether the mold release agent is a required ingredient/compound or an optional ingredient/compound. For the purpose of

examination, the examiner will reserve the right to interprets 0% weight percent of mold release agent in the prior art read on applicant's claimed invention.

Claim 54 depends on claim 49. When the film comprises 100 wt% of thermoplastic polymer (as recited in claim 49), the amount of plasticizer, monomer, lubricant, or any combination thereof (in claim 54) must be zero weight percentage. Therefore, it is unclear from the claims whether the plasticizer, monomer, lubricant are required ingredient or not.

Claims 50-55 are indefinite because they depends on indefinite claim 49.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-4, 6, 8, 15-17, 30, 35-40, 42-47, 49-50, 52-55 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over

claims 1-3, 7, 14, 19 of U.S. Patent No. 5,772,905 in view of Gebhardt et al. (US 5,731,086).

The independent claims 1, 30, 38, 49 of the present application differ from the claim of US 5,772,905 by further specifying the polymeric composition capable of being deformed by said mold at a temperature of less than 200 °C, wherein the polymeric composition comprises a thermosettable polymeric composition, a photocurable polymeric composition or both (claim 1); or wherein the polymeric composition comprises a thermosettable polymeric composition and a photocurable polymeric composition (claim 30). However, the US patent 5,772,905 clearly discloses the use the thermal plastic polymer which is capable of being deformed by the mold. Gebhardt teaches to use thermosettable polymer composition which is capable of being deform at 23.5 °C with superior duplication pattern with minimal loss of debossment precision of the grooved pattern (col. 10 lines 1-35, col. 11-12,) or the mixture of thermoset and thermoplastic (col. 26). It would have been obvious to one having ordinary skill in the art, at the time of invention, to modify US Patent 5,772,905 in view of Gebhardt by using thermoset polymer which is capable of being deformed at a temperature less than 200 °C because it has superior duplication pattern with minimal loss of debossment precision of the grooved pattern.

The claims of US 5,772,905 do not disclose the present of the internal mold release agent. However, as discussed above under 35 USC 112, 2nd paragraph, the examiner interprets that the claims of US 5,772,905 discloses to use 0 wt% of internal release agent (Read on applicant's claim limitation because it is possible for the claim of

the present invention comprises 0 wt% of internal release agent). Further, Gebhardt teaches to use release agent in order to enhance the removal process (col. 48 lines 30-40).

Respect to independent claims 1, 30, the claims of US 5,772,905 also fail to disclose photocuring, thermal curing or both thermal curing and photocuring the polymeric composition. Gebhardt teaches to thermal curing and/or photocuring the polymeric composition (col. 25 lines 15-59, col. 48 lines 58-67) in order to cure and harden the film. It would have been obvious to one having ordinary skill in the art, at the time of invention to thermal curing and/or photocuring the polymeric composition in order to cure and harden the film.

Respect to claims 2, 52 Gebhardt discloses a homopolymer, copolymer, block copolymer (col.40 line 34-47). Respect to claim 3, 39, 50, Gebhardt teaches the polymer comprises poly (vinylacetate) (See col. 42 lines 57-60, col. 44 lines 45-51).

Respect to claims 4, 40, 53, Gebhardt teaches the use oligomer comprises an epoxy resin (col. 11 lines 5-7, col. 13 lines 38-40, col. 38 lines 50-55). Respect to claim 8, Gebhardt discloses the thermosettable polymer is capable of being deformed at room temperature (col. 10 lines 1-20).

Respect to claims 6, 38, and 42, Gebhardt discloses the polymer comprises a crosslinker including divinyl benzene (col. 25 lines 1-14, col. 39 lines 55 to col. 40 line 5, col. 40 lines 35-48). It would have been obvious to one having ordinary skill in the art, at the time of invention, to modify US Patent 5,772,905 in view of Gebhardt by having crosslinker including divinyl benzene because it will help to toughening the polymer.

Respect to claim 8, Gebhardt teaches the polymer composition is capable of being deformed at room temperature (23.5 °C, col. 7 lines 45-51).

Respect to claims 15-17, 54, as discussed above the examiner interprets US 5,772,905 claim teaches to use 0 wt% monomer, and/or 0 wt% plasticizer, or 0 wt% mold release agent since the claim 5,772,905 does not mentions these ingredients. Further, Gebhardt also teachers it is possible for the polymer comprises plasticizer, monomer, addictive in order to enhance polymer composition (col. 42-43, col. 44 lines 44-52).

Respect to claims 35-37Gebhardt teaches the thermosettable is hardened by a thermal treatment (i.e. curing process) and the photocurable is harden by UV exposure (col. 11 lines 5-7, col. 25 lines 19-40). It would have been obvious to one having ordinary skill in the art, at the time of invention, to thermally curing and UV cured the polymer because it helps to harden the polymer.

Respect to claims 43-44, 46-47, Gebhardt disclose the mold imprint at least one layer of multiple layers of composite (Fig 1B-1F, col. 48). The limitation of claim 45 has been discussed above under Gebhardt reference. Respect to claim 55, Gebhardt teaches the thermoplastic polymer comprises poly (vinylacetate) (col. 42 lines 26-60, col. 44 lines 45-52).

Response to Arguments

5. Respect to previous nonstatutory obviousness-type double patenting rejection, the applicants states “Independent claims 1, 30 and 38 are amended to recite the presence of an internal mold release agent in the polymeric composition, a feature that

is not disclosed in either U.S. Patent 5,772,905 or Gebhardt. Support can be found in the specification on page 17 at line 3. Since the combination of references does not teach all c the claim features, prima facie obviousness is not supported and the rejection should be withdrawn." The examiner disagrees. First, as discussed above under 35 USC 112, 2nd paragraph rejections, it is possible for the claims of the present invention comprises 0 wt% of internal mold release agent. Second, Gebhardt teaches clearly to use release agent in col. 48 lines 30-40 or col. 49 lines 5-10. Therefore the examiner maintains that the combination of reference teaches all the limitation of the present invention.

The applicant's argument with respect to previous 35 USC 103(a) rejections in page 10-11 is persuasive. Thus, the examiner withdrew the previous 35 USC 103(a) rejection.

The applicant's amendment result additional new ground of rejection as discussed above.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Binh X. Tran whose telephone number is (571) 272-1469. The examiner can normally be reached on Monday-Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on (571) 272-1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Binh X Tran

Primary Examiner
Art Unit 1792

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